DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

P2BO
Revision 5
AVIA PROPELLER LTD.
MODEL: V510, V510T, and V10AG
November 1, 2002

TYPE CERTIFICATE DATA SHEET P2BO

This Data sheet, which is part of Type Certificate No. P2BO, prescribes conditions and limitations under which the product meets the airworthiness requirements of the Federal Aviation Regulations.

TYPE CERTIFICATE HOLDER: AVIA PROPELLER LTD.
Beranovỳch 666
Praha 9 – Letnany
Czech Republic

TYPE: Constant speed; hydraulic variable pitch, See Notes

ENGINE SHAFT: Flanged: 4.25" bolt circle

HUB MATERIAL: Steel (forged)

BLADE MATERIAL: Aluminum Alloy (Duralumin, forging)

NUMBER OF BLADES: 5

DESIGN SERIES: V510, V510T and V510AG

HUB	BLADE NOTE 2	MAXIMUM CONTINOUS HP / RPM KW	<TAKE OFF> HP / RPM KW	NOMINAL DIAMETER inches/cm	APPROXIMATE WEIGHT lbs./kg.
See NOTE 1	068-1100 (068-1000.1, 068-1000.2, 079-1000)	777.2 2080 580	777.2 2080 580	90.5in / 230cm	180 lbs. – 184.4 lbs 81.7 – 83.7 kg.

CERTIFICATION BASIS: The U.S certification basis determined under Section 21.29 of the FAR and Bilateral Airworthiness Agreement between the United States and the Czech Republic is FAR 35, effective February 1, 1965, Amendment: 35-1 to 35-6 inclusive.

TC (IMPORT) NO.

TC APPLICATION DATE: May 10, 1990

TC ISSUED: November 24, 1992 for V510, V510AG; Added March 30, 1998; V510T added August 15, 2000, revised April 5, 2002, and November 1, 2002

IMPORT REQUIREMENTS: To be considered eligible for installation on U.S. registered aircraft, each propeller to be exported to the United States shall be accompanied by a certificate of airworthiness for export or certifying statement endorsed by the exporting cognizant civil airworthiness authority which contains the following language:

(1) This propeller conforms to its United States type design Type Certificate number P2BO and is in a condition for safe operation.

(2) This propeller has been subjected by the manufacturer to a final operational check and is in a proper state of airworthiness.

Reference FAR Section 21.500 which provides for the airworthiness acceptance of aircraft engines or propellers manufactured outside the U.S. type certificate has been issued.

Additional guidance is contained in FAA Advisory Circular 21-23, Airworthiness Certification of Civil Aircraft, Engines, Propellers and Related Products, Imported into the United States.

NOTES

NOTE 1: Hub Model Designation.

068-2000 propeller V510 (3ph 200VAC de-icing)
068-2000.1 propeller V510 (28VDC de-icing)
079-2000.7 propeller V510T
083-2000.7 propeller V510AG

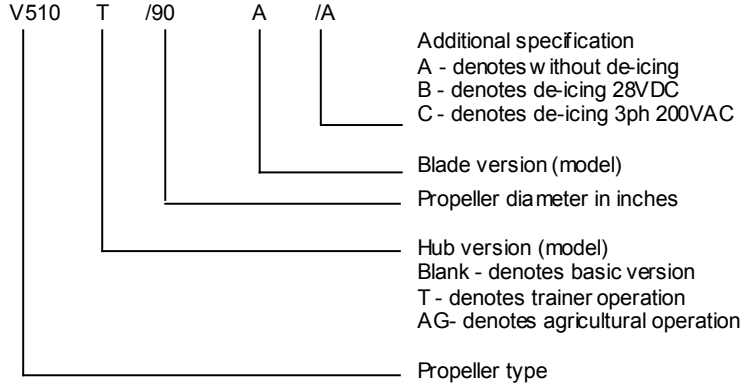
NOTE 2: Blade Model Designation.

(a) 90A – Basic blade model designation, blade drawing P/N 068-1100, clockwise rotation (propeller diameter 90.5 in.)
(1) 90A/C – P/N 068-1000.1 – blade with de-icer for version: V 510 (3ph 200VAC)
(2) 90A/B – P/N 068 – 1000.2- blade with de-icer for version: V 510 (28VDC)
(3) 90A/A – P/N 079-1000 – blade without de-icer for versions: V 510, V 510T, V 510AG

NOTE 3: Propeller designation.

The complete propeller designation is a combination of propeller hub, propeller blade and additional specifications as shown below.

BLADE MODEL DESIGNATION



NOTE 4: Pitch control.

(a) The propellers are approved for flight operation with propeller speed governors:
LUN 7816 - for versions: V 510, V 510T, V 510AG
LUN 7816.01 - for versions: V 510, V 510T, V 510AG
LUN 7816.02 - for versions: V 510, V 510T, V 510AG

(b) The propellers are approved for flight operation with propeller overspeed governor:
P/N 065-2600 - for versions: V 510, V 510T, V 510AG

NOTE 5: (a) Feathering. The propellers incorporate feathering and unfeathering features when equipped with appropriate mounted instruments (see Note 4and 8), positioning the blades into feather position.

Blade feathering is accomplished by:
(1) by oil pressure – all versions
(2) by outweighing moment of counterweights – all versions

(b) Reversing. All propeller models incorporate reversing feature when equipped with appropriate mounted instruments (see Note 4), to position the blades into reverse position. Maximum reverse angle is minus 24˚ for V510, V510T, and V510AG propellers.

NOTE 6: Right hand rotation variant.

(a) The approved propellers are right hand rotation when viewed from the pilot seat.

NOTE 7: Interchangeability of the propeller blades. Not applicable.

NOTE 8: Accessories.

(a) The propellers are approved for flight operation with the following accessories.
(1) Propeller speed governor (see Note 4)
(2) Propeller overspeed governor (see Note 4)
(3) Electric – hydraulic controller: LUN 7880.1 – for versions V510, V510T, V510AG
(4) Auxiliary pump: LUN 7840 – for versions V510, V510T, V510AG
(5) Pressure switch: 0.7S LUN 1492-04- for versions V510, V510T, V510AG
(6) Time relay LUN 2601 – for versions V510, V510T, V510AG
(7) Timer LUN 3193 – for version V510 (3ph 200 VAC)
BFGoodrich 3E1150-( ) for version V510 (28 VDC)
(8) Brush Block LUN 7850 – for version V510 (3ph 200 VAC) Pin 068-5320 – for version V510 (28 VDC)

(b) Propellers de-icing
(1) The following propeller assembly drawings denote the de-icing electrical installations:
Propeller hub: V 510 - P/N 068-0000 (3ph 200VAC)
Propeller hub: V 510 - P/N 068-0000.1 (28VDC)
(2) The following blade assembly drawings define the installation of the de-icer on the blade:
- P/N 068-1000.1, BFGoodrich de-icer P/N 6979 (3ph 200VAC)
- P/N 068-1000.2, BFGoodrich de-icer P/N 7172 (28VDC)

(c) Propeller spinner
(1) Weight of the propeller spinner is included in the total weight of the propeller

NOTE 9: Shank Fairings. Aerodynamic cover of the blade root. Not applicable.

NOTE 10: Special Limits. Life limited components for the AVIA V510 series propellers.

Life limited components of the AVIA V510 propeller are listed in Chapter 061 of the Airworthiness Limitations Section of the AVIA Maintenance Manual, 068-8912.7.

Life limited components of the AVIA V510AG are listed in chapter 061 of the Airworthiness Limitations section of the AVIA Maintenance Manual 083-8912.7.

Life limited components of the AVIA V510T are listed in chapter 061 of the Airworthiness Limitations Section of the AVIA Maintenance Manual 079-8912.7.

Time Between Overhauls (TBOs) – TBOs have also been defined by AVIA in these maintenance manuals specifically for each model, and repair intervals must be adhered to for continued airworthiness of the propeller.

NOTE 11: Operating and Service Instructions: for AVIA V510 Series Propellers.
Instructions for continued airworthiness are listed in these documents:

Version (model)	Overhaul Manual (Part Number)	Operator's, Installation and Maintenance Manual (Part Number)	Maintenance Requirements Manual (Part Number)	V510 Series Parts Catalogue (Part Number)
V 510	068-8952.7	068-8912.7	068-8942.7	068-8922.7
V 510T		079-8912.7	079-8941.7	
V 510AG		083-8912.7	068-8942.7	

NOTE 12: Special Notes. (a) Aircraft installations must be approved as part of the aircraft type certificate and demonstrate compliance with the applicable aircraft airworthiness requirements.

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